

Abstract

Improved methods for producing titanium dioxide slurries. The output from a micronizer is passed through a condenser to condense the steam and form an aqueous slurry of titanium dioxide, which can in most cases then be further concentrated as desired or which
5 can be sold or used without further concentration, instead of passing the micronizer output to apparatus for separating the TiO_2 from the steam, as is currently practiced in the art. The resultant slurry from the condenser is in a further refinement preferably sent to an agitated storage tank together with dispersant and anti-settling compounds to aid in preventing settling of the titanium dioxide solids out of the slurry. To help facilitate condensation of the
10 steam/pigment mixture sent to the condenser, a portion of the condensed slurry is in yet a further refinement pumped from the slurry storage tank to a heat exchanger. The output from the heat exchanger is then fed to the condenser to facilitate the condensing of the steam in the condenser. The temperature and volume (flow) of cooled condensate to the condenser are set to match the amount of steam and its temperature so as to ensure that substantially all of the
15 steam and contained pigment are collected from the condenser.